

FIGENSCHOU et al.
Appl. No. 10/560,925
January 14, 2008

AMENDMENTS TO THE DRAWINGS

Kindly delete the originally filed two sheets of drawings and substitute therefore the attached 3 sheets of replacement drawings attached hereto.

REMARKS/ARGUMENTS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

The Applicant and the undersigned wish to thank Mayo for the courtesies extended during the telephone interview of January 11, 2008. The issues discussed during the interview are repeated herein for the record.

The drawings were objected to because Figures 1-3 lacked proper cross-hatching indicating the types of materials. In particular, the Examiner indicated that the cross-hatching to indicate the conductor and insulation materials is improper. At the outset, it is respectfully noted that the cross-sectional illustrations provided by applicant are consistent with that provided, e.g., in the primary reference cited against the claims, Haug (USP 5,813,106). Furthermore, the cross-hatching provided, for example, for electric conductor 8 and pipe 7 is not only consistent with the applied art but proper because the simple cross-hatching used therefore is proper for cross-hatching of a non-descript, unidentified material. It is noted that while the pipes 7 and electrical conduits 8 are well known in the art, as mentioned the specification, the particular material thereof is not described and is not critical to the invention disclosed herein.

For the above reasons, it is not believed necessary, for a full and complete understanding of the invention, for more cross-hatching to be provided in applicant's Figures. In fact, it is believed that the provision of cross-hatching for example for the filler material 2,3,4,6,9 will detract from a review of the invention disclosure, particularly when compared to that of the prior art, such as the primary reference.

In view of the Examiner's comments during the interview, the corrected drawing submitted herewith corrects the cross-hatching for the outer sheath 1 to be plastic and central fluid flow line 5 to be plastic as disclosed. The filter material 2,3,4,6, and 9 is disclosed as being plastic but following the telephone interview with the Examiner it is

understood that it is acceptable for those parts not to be cross-hatched because this will detract from a review of the illustration and because conventionally in this art filler material is not cross-hatched in cross-sectional views. The simple single line cross-hatching has been maintained for conduit 7 and 8 consistent with the fact that the material of these tubes is not critical but to show that in fact a structure is present rather than a hollow space. It is believed that the revised drawings are consistent with the disclosure, consistent with the illustrations typically provided in this area of technology and are therefore proper.

It is further noted that in addition to the replacement sheets, the Examiner required applicant to submit a marked up copy of the replacement sheets including annotations indicating the changes made to the previous version.

Reconsideration and withdrawal of the drawing objection is solicited.

The abstract has been revised in view of the Examiner's objection.
Reconsideration and withdrawal of the objection to the abstract is solicited.

The Examiner also objected to the arrangement of the specification, requiring that headings be added. Headings have been added above as required by the Examiner.

Claims 2-3 were rejected under 35 USC 112, second paragraph and claim 4 was objected to as including an informality. The matters noted by the Examiner have been corrected above.

Original claims 1-4 were rejected under 35 USC 103(a) as unpatentable over Haug in view of Haxton. Applicant respectfully traverses this rejection.

As noted by the Examiner Hogue does not teach or suggest an armouring and weight adding band wrapped around the filler material and laid between the filler material and the outer sheath, nor the subject matter of applicant's dependent claims.

The secondary reference cited by the Examiner does show helically wound layers 112,212 in Figures 2 and 3. It is respectfully noted, however, that these layers are only incorporated in the cable at the "dynamic section" as Haxton discloses at column 2, line 38. The wound layers 112, 212 are used close to the surface of the water and are also referred to as "bend stiffeners" and are provided to avoid fatigue in the cable where the largest movements are expected. Haxton suggests as many as four and five layers "multi-layers" to obtain the bend stiffening of the Haxton invention. Weighting of the cable as such is not advocated by Haxton and indeed is no issue, other than, actually, a negative factor. It is thus clear that Haxton has a different purposes for the layers taught therein as compared to the present invention and teach only winding such bands close to the surface of the water, along only a limited portion of the length of the cable.

Thus, what Haxton teaches is quite different from the present invention wherein the armouring and weight adding band is wrapped around the filler material and is laid between the filler material and the outer sheath of the finished umbilical along the entire length of the umbilical. The umbilical of the invention is very useful, particularly in shallow waters, like an umbilical extending from an offshore location to a land base facility. Applicant has discovered that in such circumstances, weight elements are needed to keep the umbilical submerged, so the weight provided by the band is needed to keep the umbilical submerged, and the armouring provided by the band protects the umbilical from objects such as fishing nets, anchors, and the like which may hit the umbilical in such shallow waters. Thus, applicant has provided a solution to the weighting and armouring needs by providing the claimed band along the entire length of the umbilical. This type of design has also been creatively developed to be easy and inexpensive to make while fulfilling all the other necessary properties such umbilicals need to have.

For all the reasons advanced above, even if Haug was modified in view of Haxton, the layers taught by Haxton would be wound to Haug only along that portion of the umbilical adapted to extend through the surface of the water as a bend stiffener

and Haxton would not teach or in any way suggest that banding as claimed by applicant should be provided along the entire length of the umbilical.

In view of the foregoing, withdrawal of the Examiner's rejection is solicited.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and an early Notice to that effect is earnestly solicited.

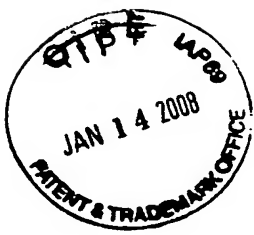
Respectfully submitted,

NIXON & VANDERHYE P.C.

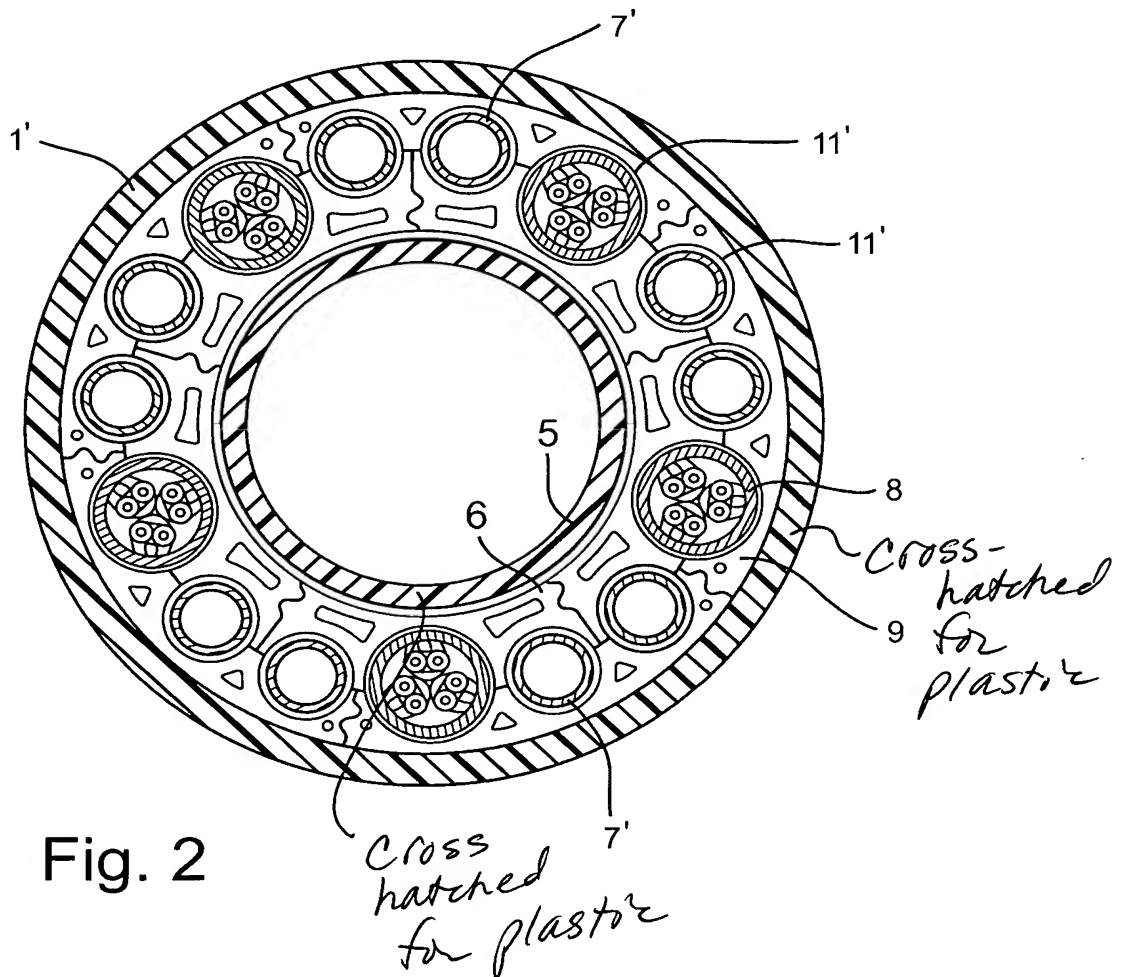
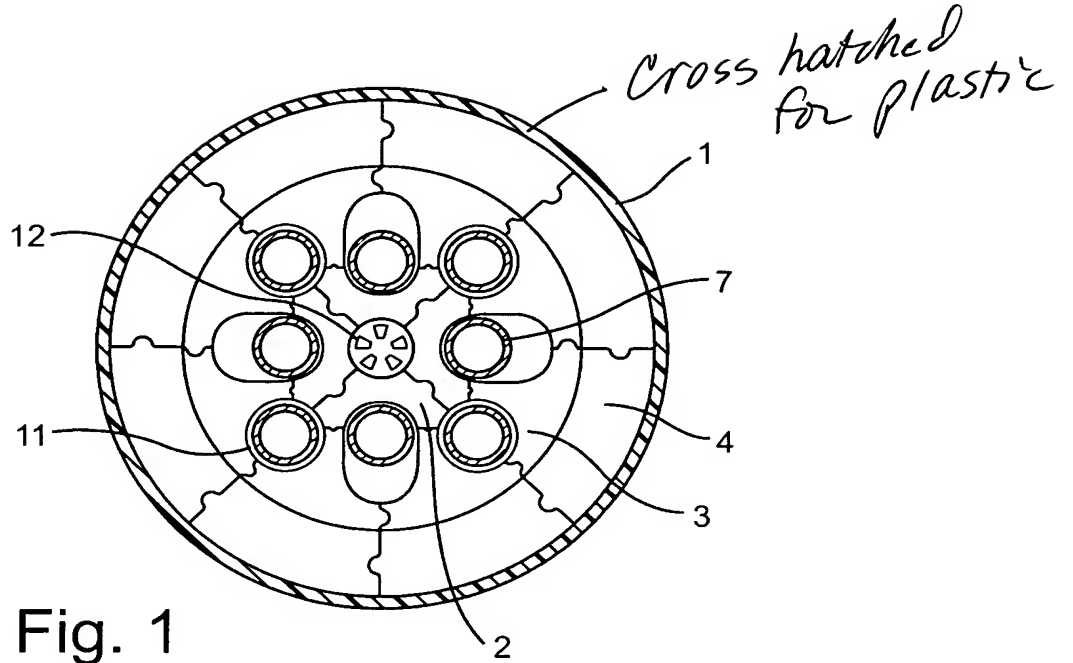
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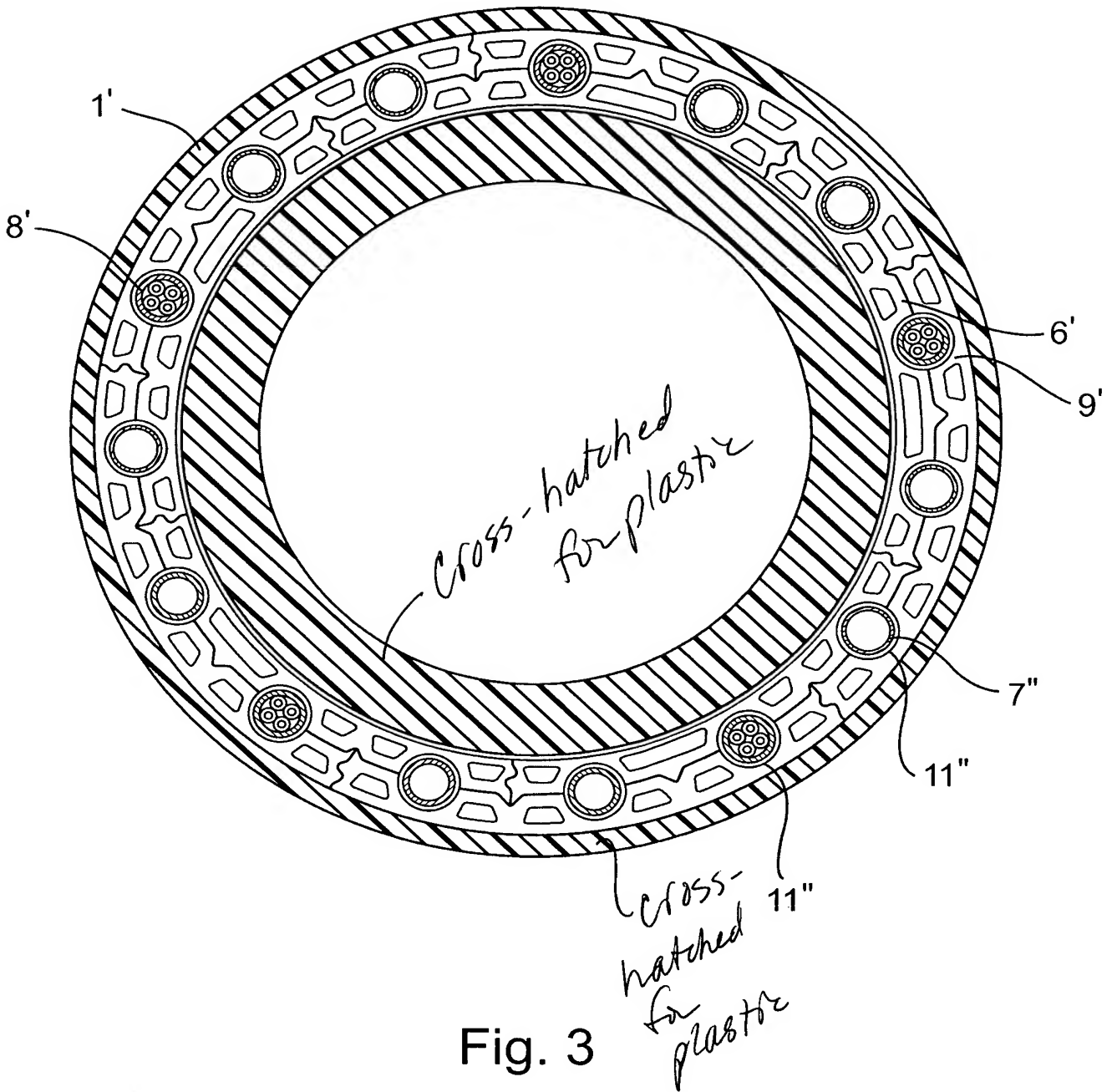
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1/3



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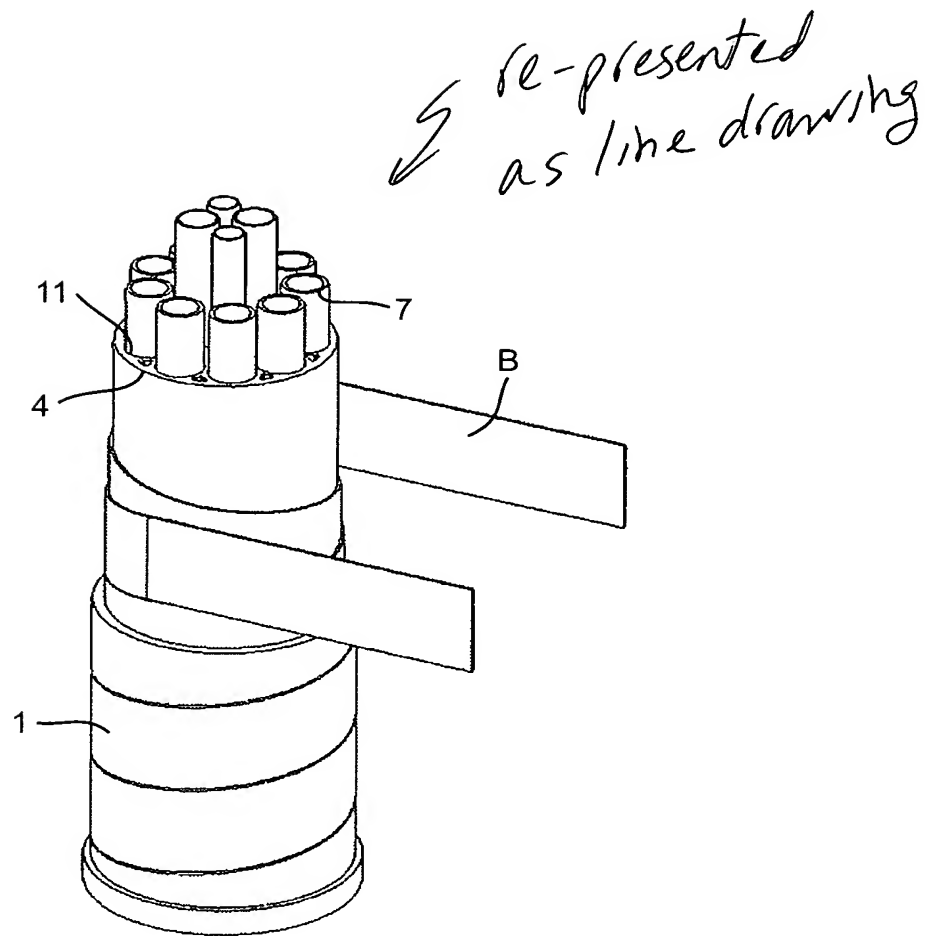


Fig. 4